

TWO NEW SPECIES OF LAELASPIS MITES

(ACARINA: LAELAPTIDAE)¹PRESTON E. HUNTER and ROBERT DAVIS,² *University of Georgia, Athens*

A review of the genus *Laelaspis*, family Laelaptidae (Hunter, 1961), included a list of the known species of mites in this genus. The present paper describes two new species of *Laelaspis* mites from material which was not available for inclusion in the above publication. This brings the total number of species listed in the genus to 17, six of which have been recorded from North America.

The body setae appear to bear the most distinguishing and easily recognized characteristics for separating closely related species of *Laelaspis*. In instances where gross morphological features appear to be very similar, quick and consistent separation can be made by checking two or three specific body setae. The setal characteristics found to be the most important are the type (spinose, simple, lanceolate, etc.) and length of the median and marginal dorsal setae, and the type and length of the ventral body setae.

Laelaspis bakeri, new species

(Figs. 1, 2)

Both sexes may be recognized by having long, spiny dorsal plate and ventral body setae and except for length these setae are similar in appearance; the seta enlarges above its base before tapering to a spined point. The setae on the ventral body plates are also long, especially on the female. The striation patterns of the ventral plates are distinct.

Female.—Rounded, 650 μ long, 570 μ wide. Distinct scale-like reticulations on dorsal plate (fig. 1A); dorsal plate setae slightly enlarged above base, long (up to 120 μ) and bearing 3-5 pairs of minute spines on terminal one third. *Ventral surface*. Sternal plate 135 μ long on midline, 150 μ at widest point between coxae II and III; margins thickened, reticulations limited to anterior half; anterior margin of sternal plate with shallow indentation posterior to base of tritosternum; sternal setae long, second and third pair about as long as shortest length of sternal plate; position of sternal pores and setae as illustrated (fig. 1B). Metasternal setae arise from well developed metasternal plates. Genito-ventral plate 345 μ long on midline from posterior margin of sternal plate, 280 μ at greatest width behind coxae IV; striations as illustrated (fig. 1B); genital setae long, arise from surface of genitoventral plate; first pair of ventral plate setae arise from margin of and attach to genitoventral plate, second and third pair arise from integument at margin of genitoventral plate. Metapodal plates

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²Assistant Professor and graduate student, respectively; Department of Entomology.

elongate, lateral of first pair ventral plate setae. A single parapodal plate on each side lateral of coxae III, IV, and the posterior half of coxa II; plate enlarges posteriolaterally of coxa IV. Peritremal plate extends posteriorly almost

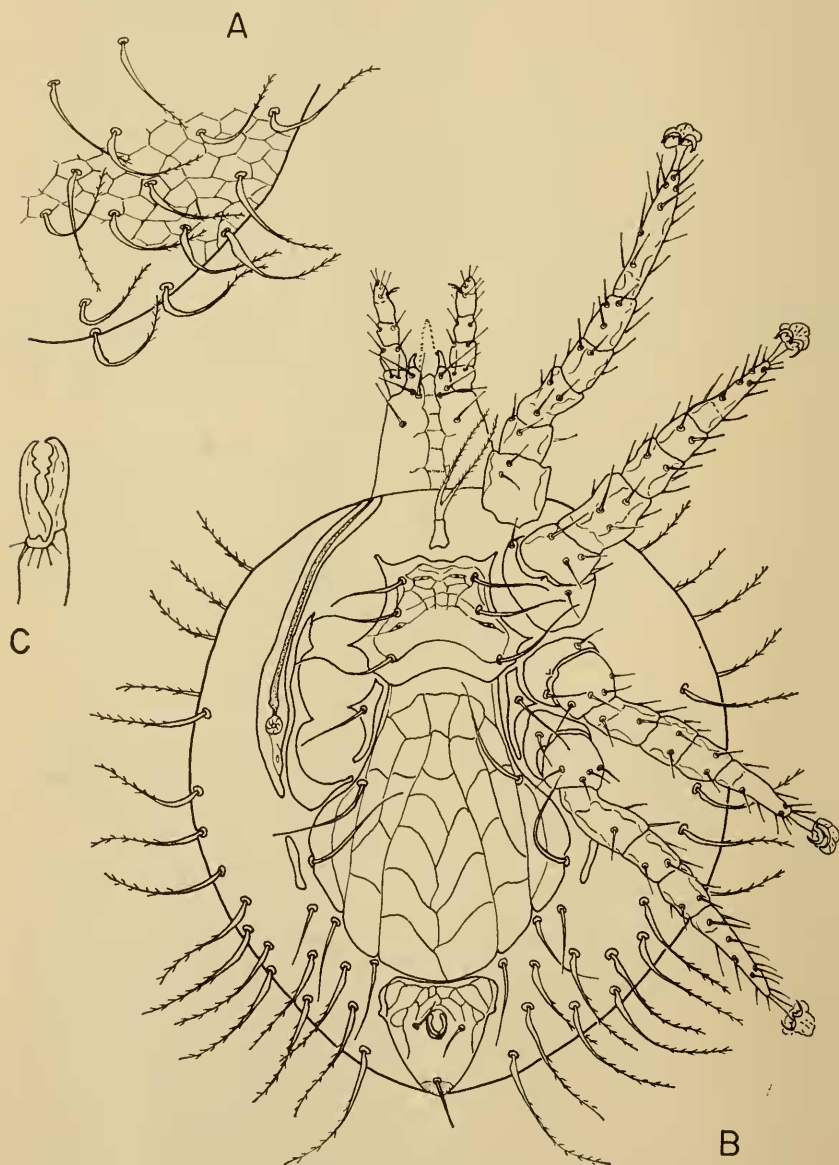


Fig. 1, *Laelaspis bakeri*, n. sp., female. A, posterior portion of dorsal plate; B, ventral view; C, chelicera.

to hind margin of parapodal plate; with a small circle on surface approximately half way between stigmata and posterior end of plate. Anal plate $125\ \mu$ long, $130\ \mu$ wide; small lateral projection on margin of plate just anterior to anal

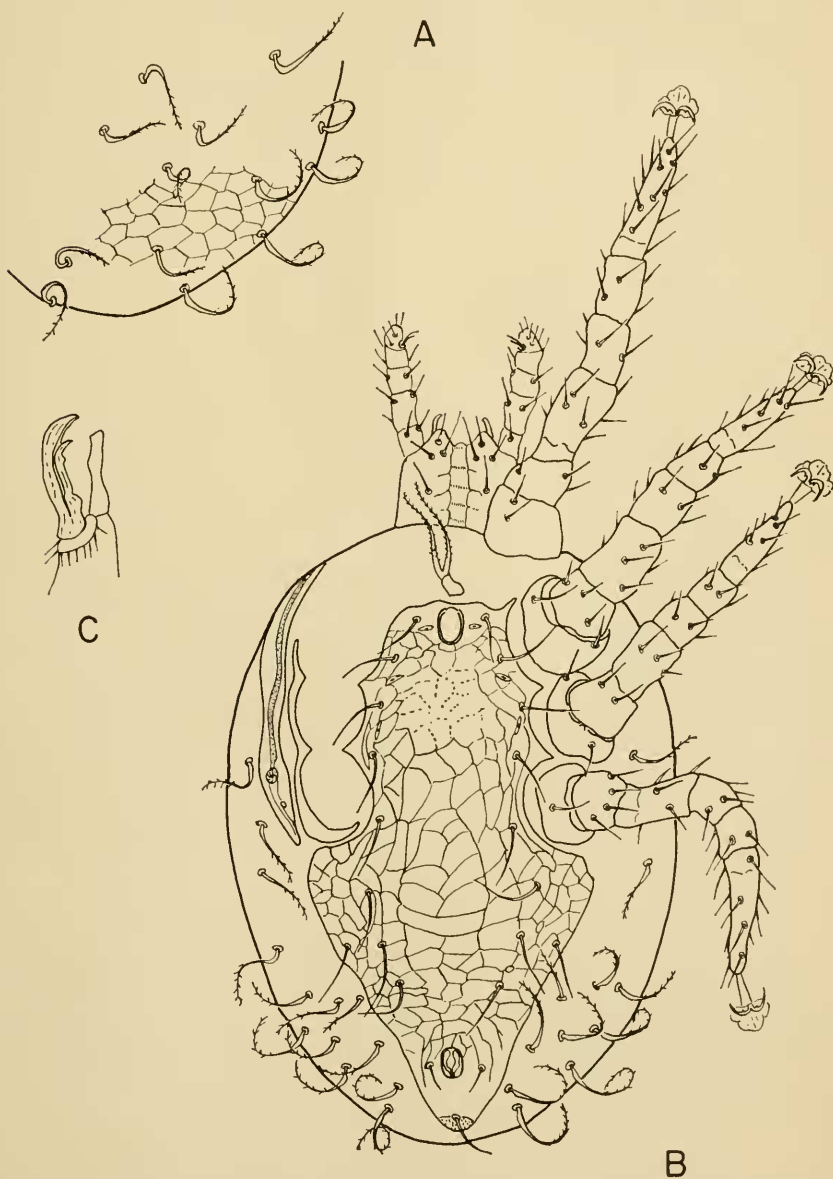


Fig. 2, *Laelaspis bakeri*, n. sp., male. A, posterior portion of dorsal plate; B, ventral view; C, chelicera.

opening; distinct reticulation pattern as illustrated; position and relative length of anal plate setae shown in fig. 1B. Ventral body setae arise from integument, long (up to $150\ \mu$), with minute spines, especially on anterior margin of setae; setae slightly enlarged above base as in dorsal plate setae. *Legs* II more robust than others; all tarsi with well developed claws; sclerotization of legs as illustrated. Lengths, including claws and coxae, as follows: leg I, $425\ \mu$; leg II, $390\ \mu$; leg III, $360\ \mu$; and leg IV, $440\ \mu$. *Gnathosoma* shows no specific modification; chelicerae strongly chelate, digits of about equal length, both with teeth (fig. 1C).

Male.—Smaller and with more oval body shape than female; $500\ \mu$ long, $375\ \mu$ wide. Dorsal plate reticulations and setae (fig. 1A) like that of female; dorsal setae up to $65\ \mu$ long. *Ventral surface*. Holoventral plate $435\ \mu$ long, $150\ \mu$ wide between coxae II and III; $230\ \mu$ wide behind coxae IV; nine pairs of setae in addition to the three anal setae, arise from this plate. Location of sternal pores and setae as shown in fig. 2B; reticulations as illustrated, becoming somewhat indistinct between coxae III. In the specimen illustrated one anterior corner of sternal plate was missing. Single parapodal plate on each side, but posterolaterally of coxae IV not enlarging as much as in female. Peritremal plate as in female. Ventral body setae spined (fig. 2B) up to $85\ \mu$ long. *Legs* II noticeably more robust than others; measurements including claws and coxae as follows: leg I, $380\ \mu$; leg II, $310\ \mu$; leg III, $290\ \mu$; and leg IV, $358\ \mu$ long. *Gnathosoma* without distinct modification; chelicerae chelate (fig. 2C), the movable digit being slightly shorter than the fixed digit, only movable digit with teeth. A strong, digitlike spermatodaetyl is present laterally of the movable digit and extends slightly beyond the end of the fixed digit.

This species was described from 13 females and 1 male all with the following collection data: "Livingston Co., Michigan, April 27, 1956; with *Myrmica fracticornis*, colr. P. Kannoowski." Six nymphs were also included in the series of specimens. The female holotype and four paratypes, and the male allotype will be deposited in the U. S. National Museum. Three female paratypes will be deposited with the Institute of Acarology, Wooster, Ohio. The remaining paratypes will be retained in the Department of Entomology collection University of Georgia.

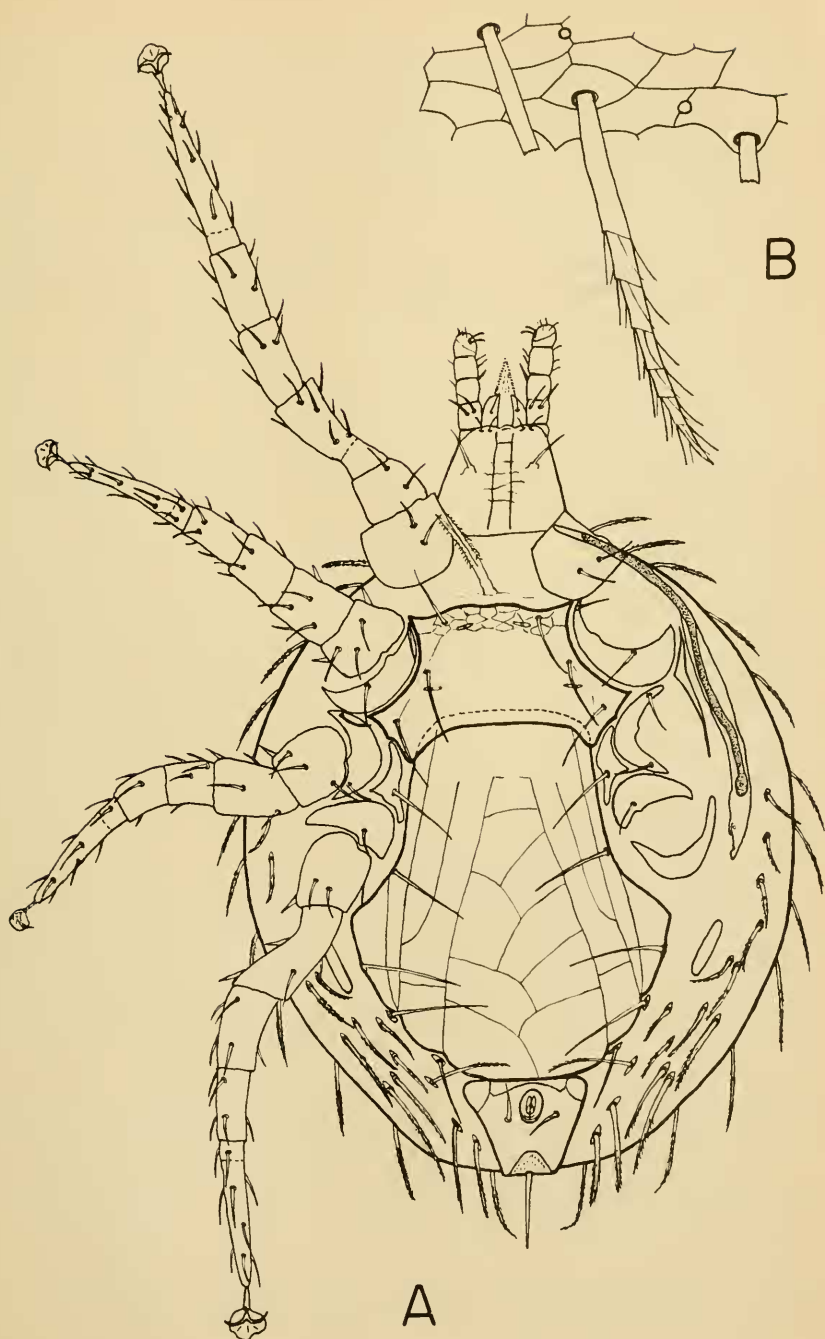
This species was named for Dr. Edward W. Baker who has given us much valuable help in our work.

Laelaspis pauli, new species

(Fig. 3)

Only the female is known. The female is distinct in having long, spiny, dorsal and dorsal marginal setae, spiny ventral body setae which arise from small individual platelets, a very narrow peritremal plate, and the presence of two parapodal plates on each side. The markings of the sternal and genitoventral plates are also distinct.

Fig. 3, *Laelaspis pauli*, n. sp., female. A, ventral view; B, portion of dorsal plate with seta.



Body oval, $530\ \mu$ long and $430\ \mu$ wide. Dorsum covered by dorsal plate; reticulations on the plate form a scale-like pattern (Fig. 3B); dorsal setae spined, up to $70\ \mu$ long on the middle of the dorsum, dorsal marginal setae up to $100\ \mu$ long. *Ventral surface.* Sternal plate distinctly wider than long, $200\ \mu$ wide and $120\ \mu$ long at its largest dimensions; anterior lateral corners not prolonged into narrow points; only lightly notched at base of tritosternum; reticulations mainly restricted to area even with, and anterior to, the first pair of sternal pores; position of the sternal setae and pores are as shown (fig. 3A). Metasternal setae arise from well-developed metasternal plates. Genitoventral plate $295\ \mu$ long on midline from posterior margin of sternal plate, $240\ \mu$ wide behind coxa IV; striations as shown (fig. 3A). This species shows fewer cross striae compared to many *Laelaspis* species. The genital and first ventral plate setae arise from the surface of the plate; the second and third pairs of ventral plate setae arise from small individual plates at the margin of the genitoventral plate. Anal plate measures $80\ \mu$ long and $100\ \mu$ wide; bears a few transverse striations on anterior part; unpaired posterior seta much heavier and over twice as long as the paired setae. Metapodal plate rectangular-shaped, well sclerotized. Peritremal plate narrow, forward of coxae II only as wide as the peritreme; ends posteriorly in a small knob-like process at the posterior margin of coxa IV; a small circle is present on the plate between the stigmata and the posterior end of the peritremal plate. Two parapodal plates are present on each side lateral of the coxae; the anterior plate narrow, extending from the middle of coxa II to near the posterior edge of coxa III; posterior plate wider, extending behind and lateral of coxa IV. Fifteen pairs of spinose ventral body setae are present posterior to leg III; each seta arises from a small platelet in the integument; position and relative length of the setae are shown in fig. 3A. *Legs* well developed; claws and caruncles are present on all tarsi; sclerotization very light or absent on the segments of the legs; legs including claws and coxae measure as follows: leg I, $490\ \mu$; II, $320\ \mu$; III, $345\ \mu$; and IV, $450\ \mu$ long. *Gnathosoma.* Chelicerae chelate, both digits well-developed and sclerotized; small pilus dentilis present on the fixed digit; fixed digit has three teeth and the movable digit two teeth.

This species was described from five specimens all with the following collection data: Morgan Co., Ga.; May 19, 1960; J. J. Paul, Collector; from ground litter around nest of ant, *Crematogaster* sp. The holotype and two paratypes will be deposited in the collection of the U. S. National Museum. The remaining two paratypes will be retained in the collection of the Department of Entomology, University of Georgia.

REFERENCE

- Hunter, Preston E., 1961. The Genus *Laelaspis* with description of three new species. Ann. Ent. Soc. Amer. 54:672-683.